

**BEFORE THE
PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA**

DOCKET NO. 2018-3-E

In the Matter of)	DIRECT TESTIMONY OF
Annual Review of Base Rates)	GLEN A. SNIDER FOR
for Fuel Costs for)	DUKE ENERGY PROGRESS,
Duke Energy Carolinas, LLC)	LLC
_____)	

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Glen A. Snider. My business address is 400 South Tryon Street,
3 Charlotte, North Carolina 28202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am currently employed by Duke Energy Corporation (“Duke Energy”) as
6 Director of Carolinas Resource Planning and Analytics.

7 **Q. PLEASE DESCRIBE YOUR CURRENT RESPONSIBILITIES IN**
8 **YOUR POSITION WITH DEC AND DEP.**

9 A. I am responsible for the development of the Integrated Resource Plans
10 (“IRPs”) for both Duke Energy Carolinas (“DEC”) and Duke Energy Progress
11 (“DEP” or the “Company”), (collectively, the “Companies”). In addition to
12 the production of the IRPs, I have responsibility for overseeing the analytic
13 functions related to resource planning for the Carolinas region. Examples of
14 such analytic functions include unit retirement analysis, developing the
15 analytical support for certificate of public convenience and necessity filings
16 for new generation, and production of analysis required to support the
17 Companies’ avoided cost calculations that are used in the Companies’ avoided
18 cost rate proceedings.

19 **Q. HAVE YOU TESTIFIED BEFORE THIS COMMISSION BEFORE?**

20 A. Yes. I have testified before the Public Service Commission on multiple
21 occasions, including in fuel proceedings in Docket Nos. 2018-1-E, 2017-1-E,
22 2016-1-E, and 2016-3-E, and in the net energy metering methodology
23 proceeding in Docket No. 2014-246-E.

1 **Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL AND**
2 **PROFESSIONAL EXPERIENCE.**

3 A. My educational background includes a Bachelor of Science in Mathematics
4 and a Bachelor of Science in Economics from Illinois State University. With
5 respect to professional experience, I have been in the utility industry for over
6 25 years. I started as an associate analyst with the Illinois Department of
7 Energy and Natural Resources, responsible for assisting in the review of
8 Illinois utilities' integrated resource plans. In 1992, I accepted a planning
9 analyst position with Florida Power Corporation and for the past 17 years
10 have held various management positions within the utility industry. These
11 positions have included managing the Risk Analytics group for Progress
12 Ventures and the Wholesale Transaction Structuring group for ArcLight
13 Energy Marketing. Prior to my current role and immediately prior to the
14 merger of Duke Energy and Progress Energy Corporation, I was Manager of
15 Resource Planning for Progress Energy Carolinas.

16 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
17 **PROCEEDING?**

18 A. The purpose of my testimony is to support the Company's calculation of the
19 components of the value of Net Energy Metering ("NEM") Distributed
20 Energy Resources ("DER").

21 **Q. COMMISSION ORDER 2015-194 REQUIRES THAT THE VALUE OF**
22 **NEM DISTRIBUTED ENERGY RESOURCES IS COMPUTED**

**ANNUALLY. WHAT IS THE 2018 VALUE AND HOW DID YOU
ARRIVE AT THAT NUMBER?**

A. Through the review of applicable input assumptions, the Company has updated the 2018 value of NEM Distributed Energy Resources to \$0.05323 per kWh for Schedules RS, RE, ES, RT, and SGS and \$0.05310 for all other schedules. Table 1, below, lists the components used to determine the value of NEM Distributed Energy Resources and their value. The calculation is consistent with the methodology approved in Order No. 2015-194. The methodology includes all categories of potential benefits or costs to the utility system that are capable of quantification or possible quantification in the future.

Table 1: Value of NEM Distributed Energy Resource, by Component

Components of NEM Distributed Energy Resource Value	Component Value (\$/kWh) Small PV¹	Component Value (\$/kWh) Large PV¹
Avoided Energy Costs	\$0.036689	\$0.036670
Avoided Capacity Costs	\$0.014212	\$0.014106
Ancillary Services	\$0.000000	\$0.000000
T&D Capacity	\$0.000000	\$0.000000
Avoided Criteria Pollutants ²	\$0.000034	\$0.000033
Avoided CO ₂ Emissions Costs	\$0.000000	\$0.000000
Fuel Hedge ³	\$0.000000	\$0.000000
Utility Integration & Interconnection Costs	\$0.000000	\$0.000000
Utility Administrative Cost	\$0.000000	\$0.000000
Environmental Costs	\$0.000000	\$0.000000
Subtotal	\$0.050935	\$0.050809
Line Losses ⁴	\$0.002296	\$0.002289
Total Value of NEM Distributed Energy Resource	\$0.05323	\$0.05310

¹“Small PV” refers to a load shape reflecting generation installed by a lower usage residential or small commercial/industrial customer. “Large PV” refers to a load shape reflecting generation installed by a customer with higher consumption requirements and applies to all other nonresidential schedules.

² Avoided Criteria Pollutants reflects NO_x and SO_x that have been separately identified from approved marginal energy costs.

³Pursuant to the Settlement Agreement reached in DEC’s 2016 annual fuel proceeding (Docket No. 2016-3-E), the Company has calculated the hedge value and determined that no fuel hedge exists; therefore, the value is zero.

⁴Line loss factors are 3.91768% for on-peak marginal energy, 3.91089% for off-peak marginal energy and 6.0521% for marginal capacity per DEC's updated 2018 line loss analysis.

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Q. PLEASE EXPLAIN WHY SOME OF THE COMPONENTS ARE VALUED AT ZERO.

A. The Company has identified the benefits or costs of several of the components of the Value of NEM DER as zero either because insufficient data and analysis exists to quantify the cost or benefit of that component or because the Company believes the actual numerical value of that component is zero.

Q. HOW DOES THE COMPANY CALCULATE AVOIDED ENERGY AND AVOIDED CAPACITY FOR VALUE OF NEM DISTRIBUTED ENERGY RESOURCES?

A. Consistent with the Settlement Agreement approved in Docket No. 2014-246-E, the avoided energy and avoided capacity components of the Value of NEM DER are based on DEC's currently-effective avoided cost for qualifying facilities ("QF") under the Public Utility Regulatory Policies Act of 1978 ("PURPA"), as approved by the Commission in Order No. 2016-349 (Docket No. 1995-1192-E). The QF avoided energy rates are given for both on-peak and off-peak periods; QF capacity value is attributed to on-peak periods only and differs for summer and non-summer months. To arrive at an annualized energy and capacity NEM DER value, a weighted average of each of these constituent QF rate components is computed. The weights are based on a representative annual hourly solar load shape's relative contribution to each of the pricing periods.

1 **Q. DOES DEC ROUTINELY REVIEW THE COST AND BENEFIT**
2 **COMPONENTS OF THE VALUE OF NET ENERGY METERING**
3 **(“NEM”) OF DISTRIBUTED ENERGY RESOURCES (“DER”)**
4 **CALCULATION?**

5 **A.** Yes. As the amount of installed customer-owned generation increases, it is
6 important that the Company continually monitors its impact to ensure safe and
7 reliable grid operations. Through this monitoring and analysis of the impact
8 of NEM DER on the Company’s system, new costs and benefits are identified.
9 Those identified costs and benefits of NEM DER are then incorporated into
10 the the Value of NEM DER calculation in the next year’s fuel case.

11 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

12 **A.** Yes. It does.